THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte CHRIS W. KORINEK

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Appeal No. 1998-0502
Application No. 08/571,323

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ON BRIEF

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Before KRASS, JERRY SMITH, and HECKER, ***Administrative Patent Judges***.

HECKER, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 20, all claims pending in this application.

The invention relates to twist-on connectors for use in fastening together stripped ends of two or more electrical

wires. In particular, the invention relates to a fastening tool/connector combination in which the connector deforms at a predefined torque level, allowing the tool to turn freely about the connector. This predefined torque level insures the wires are twisted sufficiently to achieve a good electrical connection, and yet be less than a level at which the wires or the connector will be hazardously damaged.

Representative independent claim 1 is reproduced as follows:

1. A system for joining ends of electrical wires to a predefined torque level, which comprises:

a connector having a hollow body with an open end, a closed end and an outer surface extending between the open and closed ends, and at least a portion of the outer surface having elements which form a cross section with a polygonal shape; and

a tool socket having a mechanism by which torque is applied to the tool socket, and having an aperture within which is removably received the closed end of the connector with side walls of the aperture engaging the portion of the outer surface, the aperture being larger in cross section than the connector so that a gap exists between the side walls and the outer surface, as a result of the gap the elements of the connector deform when the tool socket applies greater than the predefined torque level to the connector.

The references relied on by the Examiner are as follows:

Blaha Des. 315,139 Mar. 5, 1991

Miller	845,717	Feb. 26, 1907
Andersen	3,908,488	Sep. 30, 1975
Wright et al. (Wright)	5,284,073	Feb. 8, 1994
Ruzicka et al. (Ruzicka)	5,388,486	Feb. 14, 1995

Claims 1 through 6, 8 through 10, 12, 13 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wright in view of Blaha.[1]

Claims 7, 11 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wright in view of Blaha and further in view of Andersen.

Claim 16 stands rejected under 35 U.S.C. § 103 as being unpatentable over Wright in view of Blaha and further in view of Ruzicka.

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[1] Both Appellant and the Examiner acknowledge claims 1-20 as currently under rejection. Although not specifically recited in the rejection, we will include claims 14 and 15 as meant to be in this rejection. The language of claim 14 mirrors the language found in claim 1, and the language of claim 15 mirrors the language of claim 5. Since claims 1, 5 and 13 (base claim of claims 14 and 15) all fall under this rejection, it is logical to include claims 14 and 15 here.

Claims 18 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wright in view of Blaha and further in view of Miller.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the brief and the answer for the details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that claims 1 through 19 are properly rejected under 35 U.S.C. § 103. Thus, we will sustain the rejection of these claims but we will reverse the rejection of claim 20 for the reasons set forth ***infra***.

At the outset, we note that Appellant has indicated on page 4 of the brief the claims stand or fall together as grouped in the rejections. That is, claims 1 through 6, 8 through 10, 12 through 15 and 20 as Group A; claims 7, 11 and 17 as Group B; claim 16 as Group C; and claims 18 and 19 as Group D.

With respect to the Group A claims, with claim 1 as the representative claim, the Examiner reasons that Wright teaches the claimed tool socket for turning a fastener nut. However, Wright's nut fastener, which could be a wire nut fastener (connector), does not have the closed end, open end and outer surface as claimed. Since this is the typical structure of a wire nut connector, as known in the art and supported by Blaha, it would have been obvious to one of ordinary skill in the art to have used the Blaha nut connector with the Wright tool. With regard to the connector being deformed by a predefined torque, the Examiner reasons that it would be common knowledge that the connector would deform when excess torque is applied. (Answer-page 4.)

Appellant admits that it is well known to have deformation when excess torque is applied. However, Appellant argues that such a torque level would vary randomly from connector to connector and is not the claimed "predefined level". Such an undefined torque level would result in hazardous damage, which is what is being avoided by the current invention. (Brief-page 5.)

We do not agree with Appellant. During prosecution, the Patent and Trademark Office is required to give claims their "broadest reasonable interpretation", consistent with the specification. ***In re Morris***, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." ***In re Hiniker Co.***, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Appellant's contention, that such an excess torque level could vary randomly from connector to connector is unconvincing and unsubstantiated. It is precisely an excess torque level which deforms Appellant's connector. However, Appellant's disclosed torque level is designed to be insufficient to cause damage. This torque level, insufficient to cause damage, is not recited in claim 1. We find that, as stated by the Examiner and admitted by Appellant, excess torque will deform a nut connector. In addition, we find that connector damage will not necessarily result, and even if it did, the claim is not so limited.

Appellant argues that Wright teaches away from the present invention in that it is designed to **avoid deformation** of the connector. (Brief-page 5.)

We agree with the Examiner's position. Even though Wright teaches to avoid deformation of a connector, Wright is cited as illustrating that excess torque **will deform** a connector. Appellant only claims using a predefined torque to deform a connector. The Examiner, through Wright, has illustrated that such a predefined torque **is** excess torque.

On page 6 of the brief Appellant questions the motivation to combine Wright and Blaha. We again agree with the Examiner's position, "...it is known in the art to use a hand, a manual socket or a power not driver to twist a wire-nut connector for connecting the wire ends." (Answer-page 7.) Also, we need only look at Appellant's disclosure for further affirmation that it would have been obvious to use such a tool on nuts/fasteners. On page 1, lines 22-25, it states:

> In this application, electricians typically twist on the connectors by hand, although manual tools, such as a hexagonal socket wrench or a nut driver, can be used.

And on page 2, lines 1-5 it states:

> In a factory, the wire connectors often are attached using a pneumatically or electrically powered nut driver because of the high volume assembly at a fixed location. These power tools have a socket specifically designed to engage the body of the connector.

In view of the above, we will sustain the Examiner's rejection of claim 1, and accordingly the remainder of the Group A claims, claims 2 through 6, 8 through 10 and 12 through 15. However, we will not sustain the rejection of claim 20 since further details of the predefined torque are recited therein, and have been argued as noted supra. In particular, the limitation of "a torque level at which damage ...to the connector" does not occur.

With respect to the Group B claims, Appellant has argued nothing more than what was argued for the Group A claims (brief-page 6). Thus, for the same reasons we sustained the rejection of claim 1, we will sustain the Examiner's rejection of the Group B claims, that is claims 7, 11 and 17.

With respect to the Group C claims, Appellant has argued nothing more than what was argued for the Group A claims (brief-page 7). Thus, for the same reasons we sustained the

rejection of claim 1, we will sustain the Examiner's rejection of the Group C claims, that is claim 16.

With respect to the Group D claims, Appellant argues that the Miller patent, "...does not teach the use of a shoulder to limit the amount of torque th[at] can be applied to the wire connector." (Brief-page 7.) Appellant does not deny that Miller has the claimed shoulder. The Examiner responds that Miller's shoulder will restrict and define a depth to which the connector can be inserted into the aperture (answer-page 8). We agree with the Examiner and find no that miller teaches that which is claimed. No torque limitation is claimed, and even if it were, such a torque limitation is as inherent in Appellant's invention as it is inherent in Miller. As noted by the Examiner, limiting the depth defines the amount of surface area at which torque is transferred from the socket to the connector. (Answer-page 8.) Accordingly, we will sustain the Examiner's rejection of the Group D claims, that is claims 18 and 19.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 19 under 35 U.S.C. § 103 is

affirmed; however, the decision of the Examiner rejecting claim 20 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

ERROL A. KRASS Administrative Patent Judge	)
JERRY SMITH Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
STUART N. HECKER Administrative Patent Judge	)

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